



Environmental Product Declaration

In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

VETROSEDA Frosted Glass

from

GLASS PARTNERS SOLUTIONS SL



Programme:	The International EPD System, www.environdec.com
Programme operator:	EPD International AB
Licensee:	EPD International AB, https://www.environdec.com
Type of EPD:	EPD of multiple products, based on a representative product
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An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see www.environdec.com



GENERAL INFORMATION

Programme Information	
Programme:	The International EPD® System
Address:	EPD International AB Box 210 60 SE-100 31 Stockholm Sweden
Website:	www.environdec.com
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Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): PCR 2019:14 Construction products (version 2.0.1) c-PCR-009 EN17074:2019: Flat glass products used in building and other construction works UN CPC Code: 37192 – Glass otherwise worked (including ground, engraved, frosted or surface-treated glass)
PCR review was conducted by: The Technical Committee of the International EPD System. See www.envirodec.com for a list of members. The review panel may be contacted via support@environdec.com . Review chair: Rob Rouwette, Co-chair: Noa Meron

Third-party Verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via:
<input checked="" type="checkbox"/> Individual EPD verification without a pre-verified LCA/EPD tool Third-party verifier: Dr. Subramanian Senthilkannan Muthu drsskannanmuthu@gmail.com
Approved by: International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier:
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

The EPD owner has the sole ownership, liability, and responsibility for the EPD.

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall:

- *Be based on the same PCR (including the same first-digit version number) or be based on fully-aligned PCRs or versions of PCRs;*
- *Cover products with identical functions, technical performances and use (e.g. identical declared/functional units);*
- *Have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant);*
- *Apply identical impact assessment methods (including the same version of characterisation factors);*
- *And be valid at the time of comparison.*

For further information about comparability, see EN 15804 and ISO 14025.

INFORMATION ABOUT EPD OWNER

Owner of the EPD: GLASS PARTNERS SOLUTIONS SL

Address: C/ CORONA 31-32. PI LAS ATALAYAS

Contact: marketing@gps-glass.com

Address and contact information of the LCA practitioner commissioned by the EPD owner, if applicable:
José Guardiola, Jose.guardiola@applus.com | LGAI Technological Center S.A. (APPLUS+)

Description of the organisation:

Glass Partners Solutions (GPS from now on) is an international glass manufacturer and distributor with a permanent presence in France, Spain, and Portugal. The company offers a wide range of products providing solutions for all types of projects. With warehouses across the Iberian Peninsula and dedicated factories for laminated and acid-etched glass, GPS ensures fast, high-quality service regardless of location.

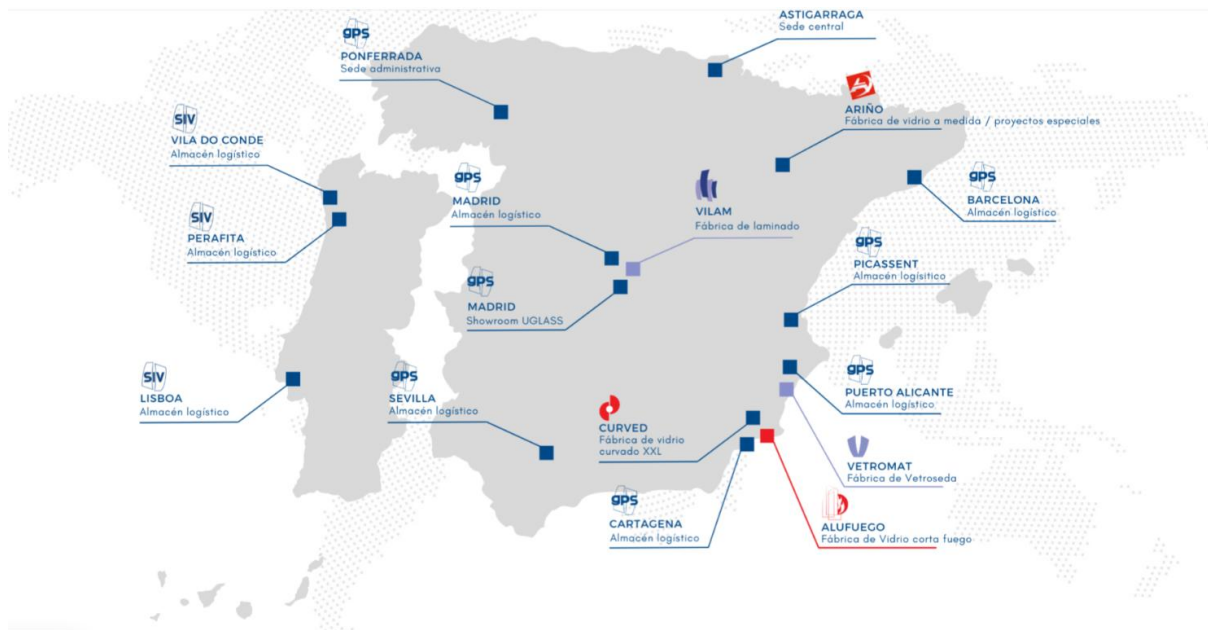


Image 1. GPS group distribution

GPS has developed a unique distribution model within the European market. This model is based on a strategic partnership with its customers, featuring a specialized range of thousands of references and a rapid distribution service powered by 86 storage points. This strategy enables the company to promptly deliver the specific glass solutions required by any project. Thanks to its logistics platforms, spanning over 50,000 m² in European ports, GPS exports mixed-product shipments of all types to every continent.

GPS Group is committed to a sustainability strategy rooted in environmental respect and responsible social development. The company defines clear action guidelines to manage and mitigate its operational impacts, aligning its practices with the United Nations **2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs)**. Furthermore, GPS adheres to the principles of the Global Compact regarding human rights, labour standards, environmental protection, and anti-corruption.



Image 2. Glass Partners solutions SL – VETROMAT Production facility.

Product-related or management system-related certifications

The product has CE marking in accordance with EN 572-9:2004, according to the European Construction Products Regulation Construction Products (CPR) No. 305/2011.

PRODUCT INFORMATION

Product name: VETROSEDA Frosted Glass

Product identification: GPS Acid-etched Frosted Glass for glazing, partitions, facades and decorative applications, manufactured in accordance with the following standard: EN 572-9:2004

VETROSEDA consists of a single float glass sheet in which one face undergoes a permanent acid-etching treatment. The process creates a granulated surface texture that diffuses light homogeneously, transforming transparent float glass into a translucent frosted finish that provides visual privacy while maintaining high light transmission. The declared product in this EPD has the combination known as 4+4 with a nominal width of 8 mm and a weight of 20 kg/m²

The acid-etched finish is the result of a permanent chemical reaction and does not peel, flake or discolour over time. VETROSEDA is compatible with further processing including cutting, tempering, laminating and incorporation into double glazing units, and is suitable for both interior and exterior applications.

Visual representation of the product:

UN CPC code: 37192 – Glass otherwise worked (including ground, engraved, frosted or surface-treated glass). According to the Statistical document `Central Product Classification (CPC) Series M No. 77, Ver.2.1.

Product description:

VETROSEDA is manufactured by Glass Partners Solutions (GPS) at their VETROMAT production facility. The product consists of a single float glass sheet in which one face undergoes an acid-etching treatment, resulting in a homogeneous and translucent surface that prevents full visual clarity from the exterior. The declared product in this EPD has the combination known as 4+4 with a nominal thickness of 8 mm.

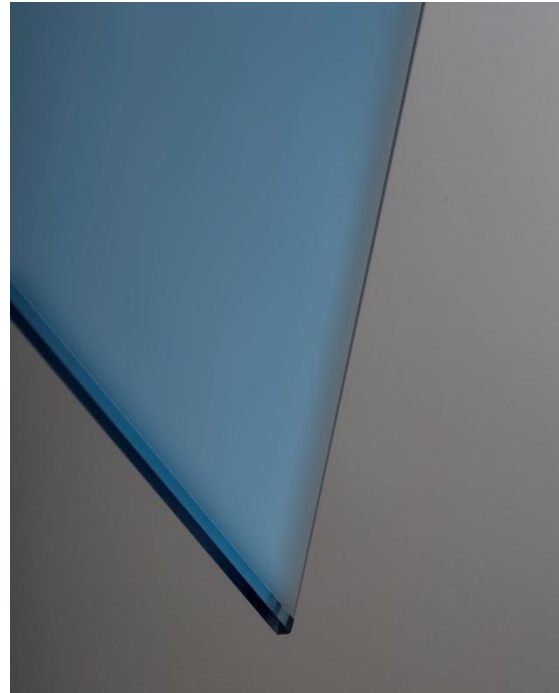


Image 3. VETROSEDA Frosted Glass.

The frosted glass is achieved by applying an acid solution onto a high-quality float glass substrate, which partially dissolves the glass surface. This process creates a granulated surface texture that scatters light, transforming transparent float glass into translucent frosted glass. The resulting finish is the product of a permanent chemical reaction, ensuring that the surface does not peel, flake or discolour over time.

This product is classified under EN 572-9:2004, which serves as the core regulation for its CE marking as basic soda lime silicate glass. VETROSEDA can be used monolithically or incorporated into laminated or double-glazed units depending on the performance requirements of the application.

Technical specifications: of the product included in this EPD:

EN 572-9:2004 Sodium-calcium silicate float glass for use in building and construction work – VETROSEDA Frosted glass 8 mm		
Essential characteristics	AVCP Systems	Performance
For uses relating to safety in case of fire:		
Resistance to fire	1	NPD
Reaction to fire	3, 4	A1
External fire performance	3, 4	NPD
For use as bullet-resistant or explosion-resistant glazing:		
Bullet resistance	1	NPD

Explosion resistance	1	NPD
For `safety in use` purposes subject to relevant regulations:		
Resistance to manual attack	3	NPD
Pendulum body impact resistance	3	NPD
Resistance to sudden temperature changes and temperature differentials (k)	4	40
Wind, snow, permanent and imposed load resistance (N/mm ²)	4	45
For uses relating to noise reduction:		
Direct airborne sound insulation (dB)	3	NPD
For uses relating to energy saving:		
Declared emissivity (<i>ed</i>)	3	NPD
U-value (W/m ² ·K)	3	NPD
Light transmission	3	0.83/0.90
Light reflection	3	0.08/0.07
Solar energy transmission	3	0.78/0.85
Solar energy reflection	3	0.07
g-value (Solar factor)	3	0.82/0.87
Durability	3	NPD

Table 1. Technical specifications **NPD: No Performance Determined**

Name and location of production site(s): GLASS PARTNERS SOLUTIONS SL
C/ CORONA 31-32. PI LAS ATALAYAS

Find more information about the product at: <https://www.vetromat.com/vetromat232b18b3>

CONTENT DECLARATION

- The mass (weight) of one unit of a product, as purchased or per declared unit:
1 m² with a weight of 20 kg and a nominal thickness of 8 mm (4+4 configuration).
- Information on the environmental and hazardous/toxic properties of substances contained in the product:

During the life cycle of the product, no dangerous substance included in the "ECHA candidate List of substances of Very High Concern (SVHC)" in a percentage greater than 0,1% of the weight of the product has been used.

The chemical substances used during the acid-etching production process (See LCA project for specific information due to confidential formula) are fully consumed or removed during manufacturing and are not present in the final product as placed on the market. All relevant safety data sheets are available from the suppliers.

Product content	Mass, kg	Post-consumer recycled material, mass-% of product	Biogenic material, mass-% of product	Biogenic material, kg C/product
Glass	20	0	0	0
TOTAL	20	0	0	0

Packaging materials	Mass, kg	Mass-% (versus the product)	Biogenic material, kg C/product
Polyethylene	0.02	0.1%	0
TOTAL	0.02	0.1%	0

Table 2. Content declaration

1 kg biogenic carbon in the product/packaging is equivalent to the uptake of 44/12 kg of CO₂.

This content declaration is for guidance, based on the typical properties and composition of the materials in the product, and does not constitute a specification.

LCA INFORMATION

Database(s) and LCA software used:

Ecoinvent v3.10 and SimaPro v10.2.0.3, based on normalization and weighting values from EF 3.1.

Modelling approach: The LCA modelling approach is attributional (non-consequential).

Declared unit: In the present study, the declared unit considered is 1 m² of Frosted Glass [VETROSEDA], having a thickness of 8 mm and a weight of 20 kg/m². The declared product consists of a single float glass sheet (20 kg/m²) that undergoes an acid-etching surface treatment at the VETROMAT production facility to produce the frosted finish.

According to PCR-009: Flat glass products used in building and other construction works, the reference unit to express environmental information is m².

Reference service life: The service lifetime recommended by the manufacturer is 30 years. This assumes that the product will last in situ with no requirements for repair, replacement or refurbishment throughout this period. Therefore, it has no impact in this stage, expect for maintenance (B2).

Geographical scope: European database and processes are applied during raw material supply and transport (A1, A2), transport of final product and distribution/installation and maintenance (A4, A5 and B2). Spanish coverage for Manufacturing (A3). and European coverage for the end-of-life stage and resource recovery stage (modules C and D).

Time representativeness: The data collected refer to the year 2024, based on production from that same year. In addition, an upstream supplier EPD has been used as a data source for the glass raw material.

Conversion factor to mass if mass is not used as declared unit:

Description	Value	Unit
Reference unit	1	m ²
Weight per reference unit	20	kg
Conversion factor to 1 kg	0.05	m ²

Table 3. Conversion factor to mass.

Description of system boundaries:

The system boundary of the EPD is defined using the modular approach set out in EN 15804. This is a 'cradle-to-grave and module D' EPD. The modules B1-B7 are included because the product has relevant use-stage activities. As permitted by EN 15804 and required by the PCR, modules A1-A3 are declared in aggregated form.

Therefore, as well as the core processes, the system includes:

- Production of all raw materials and components from basic resources;
- Transport of those materials at all stages up to GPS manufacturing facility;
- Installation in the building; maintenance of the products during its life cycle;
- Treatment of all wastes.

Modules declared, geographical scope, share of primary data (in GWP-GHG results) and data variation (in GWP-GHG results):

Module	Product stage			Distribution/Installation stage		Use stage							End-of-life stage				Beyond product life cycle	
	Raw material supply	Transport	Manufacturing	Transport	Distributionn/installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal		Reuse/recovery/recycling potential
	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	EU	EU	ES/GLO	ES	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	EU	
Specific data	67.84 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Variation: products	-66.29%/+58.32%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation: sites	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table.4 Modules declared. (X – declared modules and ND- modules not declared)

'EU = European Union/EEA average; ES = Spain-specific data; GLO = Global average dataset. Geography refers to the representativeness of the datasets used to model each module.'

Process flow diagram:

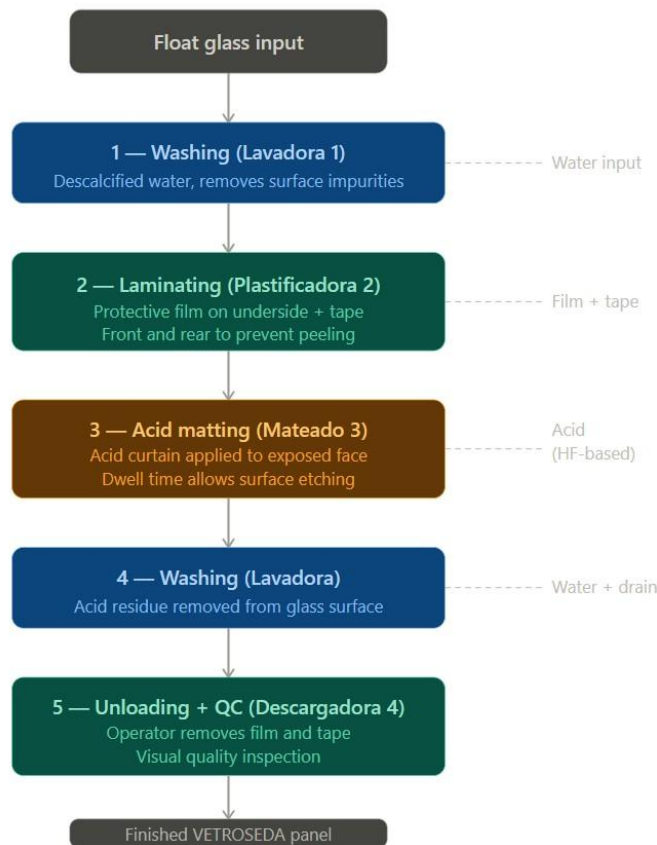


Figure 1. VETROSEDA Production process flow diagram.

Manufacturing process:

The production process of the VETROSEDA Frosted Glass, includes the following stages:

- 1. Float glass reception:** High-quality float glass is received at the facility and selected as the substrate for the acid-etching process. The glass is inspected prior to entering the production line to ensure it meets the required quality standards.
- 2. Washing:** The float glass is cleaned using demineralised water to remove any impurities, calcium deposits or surface contamination. This step ensures the glass enters the frosting cabin in the cleanest possible condition, free from any residues that could interfere with the acid-etching process.
- 3. Laminating and masking:** A protective plastic film is applied to the underside of the glass to prevent the acid from affecting that surface. Adhesive tape is applied to the leading and trailing edges of the glass to secure the protective film and prevent it from detaching during the subsequent acid-etching and washing stages.

4. **Acid-Etching:** The glass enters the frosting cabin, where it passes through an acid curtain. The acid solution — composed of confidential mixture — forms a thin film over the glass surface and is left to react for a controlled period of time. This chemical reaction partially dissolves the glass surface, creating a granulated texture that scatters light and transforms the transparent float glass into a homogeneous translucent frosted finish. Following the reaction, the glass passes through a second washing stage to remove all acid residues from the surface.
5. **Unloading and quality control:** Upon exiting the production line, the operator removes the adhesive tape and protective plastic film. A visual quality inspection is carried out to verify surface homogeneity, absence of defects and compliance with product specifications. Units are recorded, labelled and prepared for Dispatch.

Upon leaving the oven and entering the autoclave, the input and output units, breakages and units that are discarded are recorded.

6. **Dispatch / Shipping:** Packages are formed according to thickness and colour; production is recorded in kg, assigned a batch number and identification label, and entered into the daily production log; any breakages are recorded.



Image 4. VETROSEDA Frosted Glass in use.

Data Sources & Data Quality:

Data collection:

Specific data have been collected in November 2025 for the data collection period from January 2024 to December 2024. This period has been considered as `valid` and `up to date`.

Data quality assessment and declaration:

The inventory has been obtained from the site’s own data, provided by GPS staff, supplier’s EPD and from the Ecoinvent 3.10 database, included in the Internationally recognized SimaPro 10.2.0.3 software. The data quality requirements of ISO 14025 and the reference PCR have been considered in the development of this study.

The specific data based on average data from the year 2024 and are therefore less than two years old, also the data used on the manufacturing process have been provided by the manufacturer itself and are, therefore representative for the region (Spain). On the other hand, generic data from the Ecoinvent 3.10 database have been used.

The generic data are taken from the Ecoinvent database (version 3.10). The data quality assessment covers geographical representativeness, technological representativeness and temporal representativeness, and is based on the data quality criteria of Annex E, Table E.2 of EN 15804+A2:2019/AC:2021.

The quality level can be classified under the following quality levels depending on their combination of Geographical, Technical and Time representativeness: Very Good = 5; Good = 4; Fair = 3; Poor = 2; Very Poor = 1.

Analysis of the share of primary data % has been carried out in table 7.

The overall data quality can be classified as good, obtaining a score of 4.08 points out of 5.

- Geographically, the data is European. So, it obtains 4 points for every input, except for electricity which comes directly from Spain supplier as well as solar panels and Auxiliary material n°4 which has been modelled with a Global profile.
- Technically, they all follow the same manufacturing system with the same type of machinery. So, the score is 5 for the raw materials which comes directly from supplier’s EPD and the rest of the inputs obtains 4 points. The electricity has a higher score since it is specific profile of energy source used. Then, the Polyethylene used for packaging has been considered under ‘3’ for technical representativeness due to the lack of proper information about the manufacturing process.
- Temporally, the factory data is from 2024, while the database used is Ecoinvent 3.10, where the data is up to date, so, the score is 4 for each input.

The table below shows the score assigned to each input in the data quality assessment.

Inputs	Geographical representativeness	Technical representativeness	Time representativeness
A1 - Glass	4	5	4
A2 – Transportation: Truck	5	5	4
A3 – Electricity (AXPO)	5	5	4
A3 – Electricity (Autoconsumption)	5	5	4
A3 – Tap water	4	4	4
A3 – Auxiliary material n°1	4	4	4
A3 – Auxiliary material n°2	4	4	4
A3 – Auxiliary material n°3	4	4	4

A3 – Auxiliar material nº4	3	4	4
A3 – Packaging material: LDPE	4	3	4
A3 – Glass waste - Recycling	4	4	4
A3 – Chemical waste	4	4	4
TOTAL			
	4.08	4.16	4.0

Table 5. Quality assessment for VETROSEDA.

The specific data reflect based on three dimensions: temporal, technological, and geographical. Overall, the data quality is considered *good*.

As required by section 4.6.5 of the PCR, the following table provides a summary of the data quality assessment (DQA) for the datasets that contribute at least 80% of the results for each of the declared environmental impact indicators. For most indicators, the A1-A3 modules account for over 92.82% of the total impact.

Data Quality Aspect	Details / Description
Data Quality Scheme	EN 15804:2012+A:2019, Annex
Use of poor/very poor data	No poor or very poor data used.
Use of Fair data with more than 30 % of a core impact	All datasets used, except for the electricity used in the manufacturing process, show non-limited geographical representativeness. They are based on Spanish energy suppliers' specific data, which may reflect the regional context of the study.
Data Collection period for raw data	01/01/2024 – 31/12/2024
Geography	The product is manufactured in Spain and marketed European.
Technology	The specific data reflect the physical reality of the declared product, as they have been provided by the manufacturer.
Geography and technology	This EPD covers the Frosted Glass `VETROSEDA´ with 4+4 mm thickness and 20 kg/m ² . The calculated impacts for the GHG-GWP indicator within the A1-A3 in comparison with the whole life (A1-C4) cycle stages exhibit a variation of -66.29% and 58.32% among the 8 product variants included in this EPD.
LCI/LCA database	Ecoinvent v3.10
EPD used	Yes; Flat Glass: 20240940452-FC_95159_3234

Table 6. Data quality assessment.

The data quality information presented in this EPD has been prepared and reported in accordance with the requirements set forth in EN 15941:2024 and complies with the data quality criteria specified in EN 15804:2012+A2:2019.

With regards to the exclusion criteria for inputs and outputs (cut-off rules), what is indicated in the EN 17074:2019 C-PCR-009 (EN 17074:2019) standard are considered, which indicates that if there is not

enough information, processes and materials representing less than 1% of the total energy and mass can be excluded" (if they do not cause significant impacts), but this has not been the case and all has been included. The sum of all excluded inputs and outputs must not exceed 5 % of the total mass and energy used, as well as of the environmental emissions generated. Additional criteria applied include the polluter pays principle, the principle of modularity, and the exclusion of long-term emissions (beyond 100 years).

The data obtained from the company and verified by **APPLUS – LGAI Technological Center S.A.**

Process	Source type	Source	Reference year	Data category	Share of primary data
A1 – Raw material					
Glass	EPD	20240940452-FC_95159_3234	2024	Primary	63.69%
A2 – Transportation					
Transport	Collected data, Database	100%	2024	Primary	1.91%
A3 – Energy use					
Electricity.1	Collected data, Database	100%	2024	Primary	2.08%
Electricity auto consumption		100%	2024	Primary	0.15%
A3 – Packaging, transport and waste management					
Polyethylene	Collected data, Database	0%	2024	Secondary	0%
Auxiliar products	Collected data, Database	0%	2024	Secondary	0%
Waste transportation	Collected data, Database	0%	2024	Secondary	0%
Waste management	Collected data, Database	0%	2024	Secondary	0%
Total share of primary data, of GWP-GHG results for A1-A3					67.84%

Table 7. Total share of primary data for modules A1-A3.

Note: The share of primary data is calculated based on GWP-GHG results. It is a simplified indicator for data quality that does not capture all relevant aspects of data quality. The indicator is not comparable across product categories.

More information:

Whenever allocations could be avoided, primary data have been used. Where this has not been possible, mass-based physical allocations have been used.

The allocation of raw materials to the preparation of the final product is direct, as it were a recipe formulation. On the other hand, the consumption stage (A3), which is where the raw materials are transformed into VETROSEDA Frosted Glass, have been allocated based on the total VETROSEDA production at the GPS facility during the period January–December 2024, which corresponds to a declared unit of 20 kg/m².

For production waste, the initial packaging of the raw material has not been considered, because the primary raw material (float glass) is delivered without significant packaging waste. 0.1553 kg of production waste have been allocated to the manufacturing stage, according to GPS information. This waste is sent to recycling facilities with an R2 of 0.66 and a D Factor of 0.4718.

Assumptions:

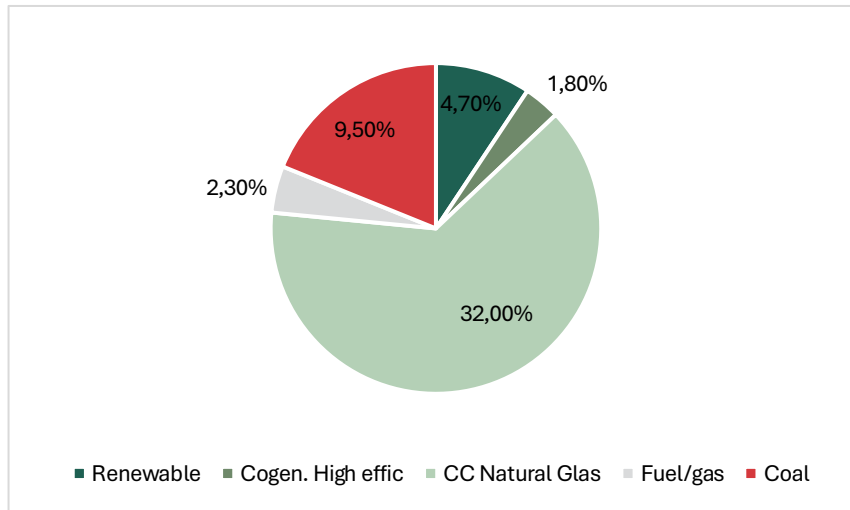
The RSL is 30 years in this EPD. This product is suitable for overhead glazing, floors and facades where fragment retention is required upon impact, floors, and facades where fragment retention is required upon impact. The RSL has been declared in concordance with c-PCR-009.

No known relevant processes or upstream materials within the system boundary were excluded from the model. In case of missing quantitative information, similar background datasets were applied to fill the gap.

- The distances to the waste disposal facilities were assumed: 80 km for recycling, 80 km for landfill and 130 km for incineration. PCR V2.0.1 Section 4.8.4, Table 4 ('Default data for modelling modules C1, C2, C3 and C4').
- No packaging materials from raw materials have been included. because the packaging weight does not represent more than 0.1% of the total product mass.
- The manufacture of production equipment, buildings and other capital goods has been excluded from the system boundary, in accordance with PCR 2019:14 v2.0.1, Section 4.3.6.

Exclusions:

- The transportation of personnel to the plant (commuting) has been excluded.
- Transportation of personnel within the plant has been excluded.
- Research and development activities have been excluded.
- Long term emissions are excluded.
- No other environmental, economic and social impacts are declared.



Graph 1. Spanish electrical mix distribution for VETROSEDA production in 2024. Source: CNMC remaining energy 2024.

Electricity details:

The electricity used during the manufacturing corresponds to the following electricity mix, based on the 2024 CNMC report from residual mix:

The Global Warming Potential (GWP) for Greenhouse Gases (GHG) of 1 kWh of electricity for this supplier for the 2024 CNMC report is 0.173 Kg CO₂ eq/kWh.

For the supplier, the composition of the Market for electricity, high voltage {ES} profile in SimaPro (Ecoinvent 3.10, EN 15804) was modified to reflect the corresponding supplier-specific energy mix as reported by the CNMC remaining energy. From the resulting ES high voltage market profile, the standard Ecoinvent transformation and distribution loss factors were applied without modification to derive the corresponding market for electricity, medium voltage {ES} and Market for electricity, low voltage {ES} profiles, which were ultimately used in the LCA calculation for module A3.

SCENARIO INFORMATION:

Construction process stage (A4-A5): The stage A4 consists of transporting the product from the production plant (VETROMAT, Alicante, Spain) to their buyers (Europe). It includes transport from the production site to the customer’s location based on a weighted average with an EURO5 Lorry, with a total of 356,365.55 kg·km. During this stage, no transport losses are assumed.

SCENARIO INFORMATION	TRANSPORT CONVEYANCE
Type of vehicle used for transport	Lorry (Truck) 16-32t, EURO5 Container Ship, (Global)
Vehicle load capacity	Lorry: 30 tons Ship: 27.500 tons
Fuel type and consumption	Lorry: 30L/100km Ship: Heavy Fuel Oil (HFO)
Distance to the site	Truck: 288 km Ship: 17,530
Capacity utilization (including empty return)	Default value from Ecoinvent 3.10 Default value from Ecoinvent 3.10
Bulk density of transported products	-
Volume capacity utilization	1

Table 8. Module A4 Scenario information.

Module A5 consists of the installation of the product in the building. In this stage, the packaging materials of the product are sent to landfill. The pre-treatment for the materials is included in this module. No ancillary materials for the installation are considered. The goal of this module is to account for the impact of the installation process. The environmental benefits from packaging recycling are accounted for in module D.

SCENARIO INFORMATION	
Auxiliar materials for use	None
Use of other resources	None
Waste of materials onsite prior to waste treatment, generated by the installation of the product. Packaging materials.	Polyethylene (LDPE): 0.02 kg
Output of materials as a results of waste treatment on the building plot.	Polyethylene (LDPE): 0.02 kg Landfill
Direct emissions to ambient, air, soil and water	None

Table 9. Module A5 Scenario information.

Module B1, B3-B7 are included into the declared scope of the EPD, but they do not represent any kind of impact due to the fact that the product only needs maintenance during it's useful life.

Maintenance (B2): Maintenance includes the technical and management actions required to keep the product in a condition where it can perform its intended functions throughout its service life, in accordance with c-PCR-009 (EN 17074:2019).

SCENARIO INFORMATION	
Maintenance process	Water and cleaning agent
Maintenance cycle	Annual average
Ancillary materials for maintenance (e.g. cleaning agent)	Cleaning agent: 0.001 kg/m ² of glass/year (30 years)
Wastage material during maintenance	0 kg
Net freshwater consumption during maintenance	0.2 kg/m ² of glass/year (30 years)
Energy input during maintenance	No required during product lifetime

Table 10. Module B2 Scenario information.

End of life stage (C1-C4): When the end of the product life stage is reached, the deconstruction begins. This EPD includes deconstruction (C1), which includes the removal of the construction mix waste, including the initial on-site selection of materials; necessary transportation (C2) from the deconstruction site to the sorting location and the distance to final disposal. The end of life stage includes final landfill disposal (C4), where the waste is disposed of, which includes physical pre-treatment and management at the disposal site, waste processing (C3), being zero for this product.

PROCESSES	UNIT (Expressed per declared unit)
Collection process specified by type	1 m ² (20 kg) collected with mixed construction waste
Deconstruction, demolition consumption (C1)	1.1 kWh of diesel per tonne according to PCR v2.0.1. Which accounts to 0.022429 kWh/m ² .
Recovery system specified by type (C3)	0 kg for Re-use 0 kg for recycling 0 kg for energy recovery
Disposal specified by type. (C4)	20 kg of product or material for final deposition

Assumptions for scenario development (C2)	Lorry (Truck) 16-32t, EURO5 market group (RER). Distance to landfill 80 km, to incineration 130 km and to recycling 80 km. According to PCR V2.0.1
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Table 11. Module C1-C4 Scenario information.

Material	A	R2	Q	D Factor
Glass (module A3)	0.1553	0.66	1	0.4718

Table 12. Module D Scenario information.

R2 = recycling efficiency factor (fraction of recycled material that effectively substitutes primary material production); Q = quality ratio (ratio of quality of recycled material to quality of primary material, Q_r/Q_{sub}); D Factor = net benefit factor for module D, calculated as: $D = A \times R2 \times Q \times (1 - A)$, where A = fraction of material sent to recycling at end-of-waste state. For glass (A3 manufacturing waste): A = 0.1553 kg, R2 = 0.66, Q = 1, D Factor = 0.4718

The waste from the manufacturing process is sent to a recycling facility and is recycled with the standardized values that are shown at the Annex_C_V2.1_May2020_

ENVIRONMENTAL PERFORMANCE

LCA results of the product(s) - main environmental performance results

Mandatory impact category indicators according to EN 15804

Results per 1 m² of VETROSEDA Frosted Glass

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO ₂ eq.	3.35E+01	4.25E+00	1.92E-04	0.00 E+00	7.06E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	7.58E-03	2.49E-01	0.00E+00	6.30E-02	-2.05E+00
GWP-fossil	kg CO ₂ eq.	3.35E+01	4.25E+00	1.92E-04	0.00 E+00	2.84E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	7.58E-03	2.49E-01	0.00E+00	6.30E-02	-2.05E+00
GWP-biogenic	kg CO ₂ eq.	0.00E+00	0.00E+00	0.00E+00	0.00 E+00	0.00E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GWP-luluc	kg CO ₂ eq.	1.28E-02	1.18E-04	7.42E-09	0.00 E+00	4.22E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	2.61E-07	6.10E-06	0.00E+00	4.30E-06	-5.52E-04
ODP	kg CFC 11 eq.	1.70E-07	6.79E-08	3.43E-12	0.00 E+00	6.98E-10	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.19E-10	5.07E-09	0.00E+00	8.37E-10	-4.37E-08
AP	mol H ⁺ eq.	1.62E-01	1.07E-01	8.49E-07	0.00 E+00	3.86E-04	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	7.09E-05	6.18E-04	0.00E+00	5.39E-04	-2.05E-02
EP-freshwater	kg P eq.	3.75E-03	3.43E-06	8.56E-10	0.00 E+00	3.77E-06	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	7.17E-09	2.08E-07	0.00E+00	7.49E-07	-3.24E-05
EP-marine	kg N eq.	8.31E-02	2.69E-02	3.45E-07	0.00 E+00	4.01E-04	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.33E-05	2.37E-04	0.00E+00	2.28E-04	-3.19E-03
EP-terrestrial	mol N eq.	3.63E-01	2.98E-01	3.78E-06	0.00 E+00	1.44E-03	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.65E-04	2.60E-03	0.00E+00	2.50E-03	-3.92E-02
POCP	kg NMVOC eq.	8.96E-02	8.09E-02	1.33E-06	0.00 E+00	1.92E-04	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.09E-04	1.08E-03	0.00E+00	7.86E-04	-1.05E-02
ADP-minerals&metals*	kg Sb eq.	8.49E-05	6.62E-08	6.42E-12	0.00 E+00	1.07E-07	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	3.17E-10	8.20E-09	0.00E+00	2.22E-09	-9.00E-07



ADP-fossil*	MJ	3.57E+02	5.31E+01	2.46E-03	0.00 E+00	2.87E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	9.98E-02	3.28E+00	0.00E+00	7.83E-01	-2.31E+01
WDP*	m ³	6.63E+00	4.53E-02	3.15E-06	0.00 E+00	4.20E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.30E-04	3.44E-03	0.00E+00	1.39E-03	-5.94E-01
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential. Accumulated Exceedance; EP-freshwater = Eutrophication potential. fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential. fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential. Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential. deprivation-weighted water consumption															

** Disclaimer:*

The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

The estimated impact results are only relative statements. which do not indicate the endpoints of the impact categories. exceeding threshold values. safety margins and/or risks.

The results of the end-of-life stage (modules C1-C4) should be considered when using the results of the product stage (modules A1-A3)

Note 1. Negative values in Module D represent the environmental benefits from recycling. reuse. or energy recovery beyond the product's life cycle. These credits highlight the product's contribution to a circular economy by offsetting environmental burdens.

The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.

Additional mandatory and voluntary impact category indicators

Results per 1 m² of VETROSEDA Frosted Glass

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG ¹	kg CO ₂ eq.	3.35E+01	4.25E+00	1.92E-04	0.00 E+00	7.06E-02	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	7.58E-03	2.49E-01	0.00E+00	6.30E-02	-2.05E+00
ETP - fw	CTUe	3.23E+02	1.74E+01	5.40E-04	0.00 E+00	9.55E-01	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	1.17E-02	9.55E-01	0.00E+00	1.20E-01	-1.50E+01

¹ This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO₂ is set to zero.



PM	disease incidence	2.81E-06	1.38E-07	2.47E-11	0.00E+00	6.41E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.03E-09	1.63E-08	0.00E+00	1.43E-08	-2.04E-07
HTP - c	CTUh	1.05E-07	5.84E-10	9.30E-14	0.00E+00	2.73E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.32E-13	1.88E-11	0.00E+00	8.31E-11	-1.45E-10
HTP - nc	CTUh	3.49E-07	1.28E-08	1.21E-12	0.00E+00	1.86E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.58E-12	1.64E-09	0.00E+00	1.48E-10	-3.31E-09
IR*	kBq U235 eqv.	5.61E-01	4.96E-03	4.06E-07	0.00E+00	5.28E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.93E-06	4.47E-04	0.00E+00	1.78E-04	-3.37E-02
SQP	Pt	6.60E+01	9.25E-02	4.34E-03	0.00E+00	3.09E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-04	7.34E-03	0.00E+00	4.33E+00	-2.99E+00
<i>Acronyms</i>		ETP-fw = Ecotoxicity, freshwater; PM = Particulate Matter; HTP-c = Human toxicity, Cancer; HTP-nc = Human toxicity, non-cancer; IR = Ionising radiation, human health; SQP = Land use.														

** This impact category deals with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.*

Resource use indicators

Results per 1 m² of VETROSEDA Frosted Glass

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1.10E+01	1.22E-01	1.14E-05	0.00E+00	1.72E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.10E+01	1.22E-01	1.14E-05	0.00E+00	1.72E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRE	MJ	1.04E+02	5.31E+01	2.46E-03	0.00E+00	3.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.98E-02	3.28E+00	0.00E+00	7.83E-01	-2.31E+01



PENRM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	1.04E+02	5.31E+01	2.46E-03	0.00E+00	3.46E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.98E-02	3.28E+00	0.00E+00	7.83E-01	-2.31E+01
SM	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m ³	-2.82E+00	1.11E-03	7.73E-08	0.00E+00	9.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-06	8.42E-05	0.00E+00	3.42E-05	-1.42E-02
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

Waste indicators

Results per 1 m² of VETROSEDA Frosted Glass

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.88E+00	4.63E-03	2.00E-02	0.00E+00	8.09E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-05	1.63E-04	0.00E+00	2.00E+01	1.88E+00
Non-hazardous waste disposed	kg	3.02E+03	1.78E-01	3.71E-05	0.00E+00	1.30E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.63E-04	1.31E-02	0.00E+00	3.03E-02	3.02E+03



Radioactive waste disposed	kg	5.04E-03	2.97E-06	2.80E-10	0.00E+00	3.70E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.10E-09	3.08E-07	0.00E+00	1.22E-07	5.04E-03
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Output flow indicators

Results per 1 m² of VETROSEDA Frosted Glass

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	3.37E+00	9.57E-07	6.89E-11	0.00E+00	2.18E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for energy recovery	kg	3.08E-02	2.60E-08	2.49E-12	0.00E+00	5.91E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy. electricity	MJ	9.16E-02	1.32E-03	1.49E-07	0.00E+00	1.98E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy. thermal	MJ	1.30E-01	1.19E-03	2.21E-07	0.00E+00	3.22E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Other environmental performance indicators

Results per declared unit		
Biogenic carbon content	Unit	Quantity
Biogenic carbon content in product	Kg C	0.00E+00
Biogenic carbon content in packaging	Kg C	0.00E+00

Table 13. Biogenic carbon content per declared unit

Variability Analysis

In the EPD document, several environmental indicators show a variation above 10% across the product family. Therefore, the percentage variation is declared for all indicators exceeding this threshold.

The results of the key environmental indicators for modules A-C were then compared. As shown in the table below, the results reveal significant differences across multiple indicators. Consequently, the LCA results are based on the representative product: 1 m² of VETROSEDA Frosted Glass with a thickness of 8 mm (20 kg/m²), representing the full VETROSEDA product family. Results for the minimum (3 mm) and maximum (15 mm) thicknesses are also declared. Therefore, the EPD includes 8 products, but the LCA results reflect the VETROSEDA Frosted Glass for 8 mm.

LCA result of one declared unit product (A-C)	Unit	Min (3mm)	Representative (8mm)	Max (15mm)
GWP-fossil	kg CO2 eq.	2.28E+01	3.60E+01	6.02E+01
GWP-biogenic	kg CO2 eq.	0.00E+00	0.00E+00	0.00E+00
GWP-luluc	kg CO2 eq.	5.21E-02	5.46E-02	6.51E-02
GWP-total	kg CO2 eq.	2.40E+01	3.61E+01	3.05E-07
ODP	kg CFC 11 eq.	2.12E-07	2.01E-07	3.78E-01
AP	mol H+ eq.	1.96E-01	2.49E-01	4.50E-03
EP-freshwater	kg P eq.	3.09E-03	3.72E-03	1.43E-01
EP-marine	kg N eq.	8.64E-02	1.08E-01	9.47E-01
EP-terrestrial	mol N eq.	4.82E-01	6.29E-01	2.42E-01
POCP	kg NMVOC eq.	1.31E-01	1.62E-01	1.19E-04
ADP-minerals&metals*	kg Sb eq.	7.62E-05	8.42E-05	6.76E+02
ADP-fossil*	kg CO2 eq.	2.41E+02	3.91E+02	7.82E+02
WDP	m3 depriv.	5.50E+02	6.51E+00	6.18E+01
GWP-GHG	kg CO2 eq.	2.39E+01	3.61E+01	3.05E-07

Table 14. VETROSEDA Family variability analysis

ABBREVIATIONS

Abbreviation	Definition
General Abbreviations	
EN	European Norm (Standard)
EPD	Environmental Product Declaration
EF	Environmental Footprint
GPI	General Programme Instructions
ISO	International Organization for Standardization
LCA	Life Cycle Assessment
PCR	Product Category Rules
c-PCR	Complementary Product Category Rules
CEN	European Committee for Standardization
Environmental Impact Indicators (EN 15804)	
GHG	Greenhouse gas
GWP	Global Warming Potential (kg CO ₂ eq.)
GWP-fossil	Global Warming Potential from fossil sources (kg CO ₂ eq.)
GWP-biogenic	Global Warming Potential from biogenic sources (kg CO ₂ eq.)
GWP-luluc	Global Warming Potential from land use and land use change (kg CO ₂ eq.)
GWP-total	Total Global Warming Potential (kg CO ₂ eq.)
GWP-GHG	Global Warming Potential for greenhouse gases (kg CO ₂ eq.)
ODP	Ozone Depletion Potential (kg CFC-11 eq.)
AP	Acidification Potential (mol H ⁺ eq.)
EP	Eutrophication Potential
EP-freshwater	Freshwater eutrophication potential (kg P eq.)
EP-marine	Marine eutrophication potential (kg N eq.)
EP-terrestrial	Terrestrial eutrophication potential (mol N eq.)
POCP	Photochemical Ozone Creation Potential (kg NMVOC eq.)
ADP	Abiotic Depletion Potential
ADP-minerals&metals	Abiotic depletion potential for non-fossil resources (kg Sb eq.)
ADP-fossil	Abiotic depletion potential for fossil resources (MJ)
WDP	Water Deprivation Potential (m ³)
Resource Use Indicators	



PERE	Use of renewable primary energy excluding renewable primary energy resources used as raw materials (MJ)
PERM	Use of renewable primary energy resources used as raw materials (MJ)
PERT	Total use of renewable primary energy resources (MJ)
PENRE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (MJ)
PENRM	Use of non-renewable primary energy resources used as raw materials (MJ)
PENRT	Total use of non-renewable primary energy resources (MJ)
SM	Use of secondary material (kg)
Waste indicators	
HW	Hazardous Waste (disposed) (kg)
NHW	Non-Hazardous Waste (disposed) (kg)
RW	Radioactive Waste (disposed) (kg)
Output Flow Indicators	
CFR	Components for Reuse (kg)
MR	Material for Recycling (kg)
MER	Materials for Energy Recovery (kg)
EEE	Exported Energy. Electricity (MJ)
EET	Exported Energy. Thermal (MJ)
Lifecycle Stages / Modules	
A1	Raw material supply
A2	Transport
A3	Manufacturing
A4	Transport to site
A5	Construction/Installation
B1	Use
B2	Maintenance
B3	Repair
B4	Replacement
B5	Refurbishment
B6	Operational energy use
B7	Operational water use
C1	Deconstruction/Demolition
C2	Transport to waste processing
C3	Waste processing
C4	Disposal
D	Reuse-Recovery-Recycling potential
Other Relevant Terms	



SVHC	Substances of Very High Concern
MJ	Megajoule
kg	Kilogram
m ³	Cubic Meter
NMVOG	Non-Methane Volatile Organic Compounds
CO ₂ eq.	Carbon Dioxide Equivalents
kg C	Kilograms of Carbon
kg CO ₂ eq.	Kilograms of Carbon Dioxide Equivalent
ND	Not Declared
LCIA	Life Cycle Impact Assessment
LCI	Life Cycle Inventory
LHV	Lower Heating Value
ILCD	International Reference Life Cycle Data System
PEF	Product Environmental Footprint
OEF	Organization Environmental Footprint
DQA	Data Quality Assessment
RSL	Reference Service Life
PPP	Polluter Pays Principle
B2B	Business to Business
EU	European Union
ES	Spain (ISO 3166 country code)
GLO	Global average dataset
RER	European average dataset (Rest of Europe)
EURO5	Euro 5 emission standard for road transport
CAS	Chemical Abstracts Service registry number
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
CNMC	Comisión Nacional de los Mercados y la Competencia
GPS	Glass Partners Solutions SL

Table 15. Abbreviations

VERSION HISTORY

Original Version of the EPD. 2026-06-02

REFERENCES

References

General Programme Instructions of the International EPD® System. Version 5.0.1

ISO 14040:2006. Environmental management - Life cycle assessment - Principles and framework; EN ISO 14040:2006

ISO 14044:2006. Environmental management - Life cycle assessment - Requirements and guidelines; EN ISO 14040:2006

ISO 14025:2006: Environmental labels and declarations — Type III environmental declarations — Principles and procedures

EN 15804+A2: 2019/AC:2021: Sustainability of construction works — Environmental Product Declarations — Core rules for the product category of construction product

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Annex C to the Product Environmental Footprint (PEF)/Organisation Environmental Footprint (OEF) Methods, Updated May 2020. European Commission, Joint Research Centre

LCA report information for the environmental product declaration of VETROSEDA. APPLUS – LGAI Technological Center. 26/32303152 version 2. May 2026

ADDITIONAL ENVIRONMENTAL INFORMATION

The following **conversion factors** can be used for converting the declared LCA results of VETROSEDA Frosted Glass to other thicknesses within the product family:

Thickness (mm)	3	4	5	6	8	10	12	15
Weight final product (A3)	7.5	10	12.5	15	20	25	30	37.5
Allocation formula	0.337	0.469	0.603	0.734	1	1.166	1.333	1.583

Table 16. VETROSEDA Family allocation formula.

The VETROMAT facility's company calculated its CO2 emissions at the organizational level (Scope 1 + 2) for the year 2023 and set reduction targets of 5% reduction for Scope 1 and 44% reduction of Scope 2 for the period 2024-2027. As proof of this commitment, it obtained the "I calculate" seal from MITERD. Spain's Ministry for Ecological Transition.



